

Work Order ID 141039

Tuesday, February 23, 2016 3:12:55 PM

141039

Page 1

Item ID: D135-692-041

Accept

N900040100Setup Start ***NS1***

Revision ID:

Stop ***NS2***

Item Name: EC135 Bearpaw Wearplates

Start Date: 1/14/2016 Start Qty: 2.00

2

Cust Item ID:

Required Date: 1/26/2016 Req'd Qty: 2.00

2

Customer:

Reference:

Approvals: Process Plan: *MCS*

Date: FEB 23 2016 Tooling:

Date:

Run Start ***NR1***

QC:

Date: SPC (Y/N):

Date:

Stop ***NR2***Sequence ID/
Work Center IDOperation
DescriptionSet Up/
Run Hours

Tool ID

Tool #

Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

Draw Nbr

Revision Nbr

DSI9400

Rev A

100

Document Control

0.00

DAS
6
9-89***100***

DOCUMENT CONTROL

DC

Memo

0.00

Doc.Control -USB or Paperwork

Photocopy bluefile and create labels per PPP D135-692-041 CHG001

FEB 26 2016

110

Packaging

0.00

110

Packaging

Memo

0.00

Packaging

2 DAS
6
9-89

FEB 23 2016

120

QC4- 100% Inspect kits for completeness

0.00

120

QC

Memo

0.00

Quality Control

2X DAS
27
9-89

FEB 26 2016

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐			
Date :	Step #:	QTY Effective :		MRB (QSI042) Approval	
Description Work Order Deviation		Disposition			
				Completed By	
				Lead hand / Supervisor Approval Verification	
				QC / QA Coordinator Approval	
Root Cause Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐ No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐		FAULT CATEGORY Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐ Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Mislabeled ☐ Fit/Function ☐ Misaligned/off center ☐ Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐			
OTHER : ☐					

Work Order ID 141039

Tuesday, February 23, 2016 3:12:55 PM

141039

Page 2

Item ID: D135-692-041

Accept

N900040100Setup Start ***NS1***

Revision ID:

Stop ***NS2***

Item Name: EC135 Bearpaw Wearplates

Start Date: 1/14/2016 Start Qty: 2.00

2

Cust Item ID:

Required Date: 1/26/2016 Req'd Qty: 2.00

2

Customer:

Reference:

Approvals:

Process Plan:

Date:

Tooling:

Date:

Run Start ***NR1***

QC:

Date:

SPC (Y/N):

Date:

Stop ***NR2***Sequence ID/
Work Center IDOperation
DescriptionSet Up/
Run Hours

Tool ID

Tool #

Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

130

0.00

130

Packaging

Packaging

Memo

0.00

Packaging

Identify and pack for shipping as per PPP D135-692-041
CHG001 Location: 128 PPP Rev: _____

X2

DAS
27
9-89

140

QC21- Final Inspection - Work Order Release

0.00

140

QC

Memo

0.00

Quality Control

FEB 26 2016

MWS

FEB 26 2016

MWS

FEB 26 2016

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval Completed By Lead hand / Supervisor Approval Verification QC / QA Coordinator Approval		
Description Work Order Deviation				Disposition					
Root Cause Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐ No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐		FAULT CATEGORY Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐ Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Mislabeled ☐ Fit/Function ☐ Misaligned/off center ☐ Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐							
		OTHER : ☐							

Picklist Print

Tuesday, February 23, 2016 3:13:00 PM

Work Order ID: 141039

141039

Parent Item: D135-692-041

D135-692-041

Parent Item Name: EC135 Bearpaw Wearplates

Start Date: 1/14/2016

Required Date: 1/26/2016

Start Qty: 2.00

Required Qty: 2.00

Comments: IPP Rev:A new issue ECN1089 08-02-04 DD verified by:EC
IPP Rev:B ECN 1132 08-02-20 DD verified by:EC

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued DAS	Status
AN4-13A *AN4-13A* Bolt		Purchased	No				Each	278.0000	16			DAS 6 9-89	DAS 28 9-89

DAS
27
9-89

Location	Loc Qty	Loc Code
FG	20	
122808	20	
GA	120	
m134167	120	
over003	50	
m134039	50	
ST344	88	
m126193	6	
m133998	82	

MS21042L4

Purchased

No

110

Each

2,544.000

16

MS21042L4

Locknut

DAS
27
9-89

Location	Loc Qty	Loc Code
FP001	41	
m133363	41	
GA	456	
m133769	456	
ST007	1500	
m134055	1500	
ST303	450	
m133769	450	
ST305	97	
m130922	97	

FEB 23 2016

DAS
6
9-89
DAS
28
9-89

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :				MRB (QSI042) Approval Completed By Lead hand / Supervisor Approval Verification QC / QA Coordinator Approval	
Description Work Order Deviation				Disposition					
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		☐ OTHER : _____							

Picklist Print

Tuesday, February 23, 2016 3:13:01 PM

Work Order ID: 141039

Parent Item: D135-692-041

Parent Item Name: ECI35 Bearpaw Wearplates

141039

D135-692-041

Start Date: 1/14/2016

Required Date: 1/26/2016

Start Qty: 2.00

Required Qty: 2.00

D3719-041 Manufactured No 120 Each 4.0000

D3719-041
Wearplate Assembly

**

DAS
6
9-89

DAS
28
9-89

Location

Loc Qty

Loc Code

ST186

4

136554

3

136854

1

NAS1149D0463J Purchased No 120 Each 5,027.000

NAS1149D0463J
WASHER

**

DAS
6
9-89

DAS
28
9-89

Location

Loc Qty

Loc Code

GA

237

M129390

41

M132035

196

ST263

3442

M134039

3442

ST269

1348

M130799

360

M132317

100

M132677

888

DAS
27
9-89

DAS
6
9-89

FEB 23 2016

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval Completed By Lead hand / Supervisor Approval Verification QC / QA Coordinator Approval		
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		OTHER : ☐							

DART SERVICE INSTRUCTION

TO AMEND INSTALLATION INSTRUCTIONS IIN-D135-692 REV. A

REF. FAA STC: SR01042SE

The D135-692-041 Wearplate Kit can be installed on Dart D135-692-011 Bearpaw Installations. The D3719-041 Wearplates should be installed on the D3049-1 Bearpaws as shown in Figure 1 on sheet 2 of this service instruction. The bearpaw should otherwise be installed on the skidtube per installation instructions IIN-D135-692 Rev. A.

WEIGHT AND BALANCE

Installation	Weight	LATERAL		LONGITUDINAL	
		Arm	Moment	Arm	Moment
D135-692-041	2.24 lb	0.0 in	0.0 in-lb	199.7 in	447 in-lb
Wearplate Kit	1.0 kg	0.0 m	0.0 m-kg	5.07 m	5.1 m-kg

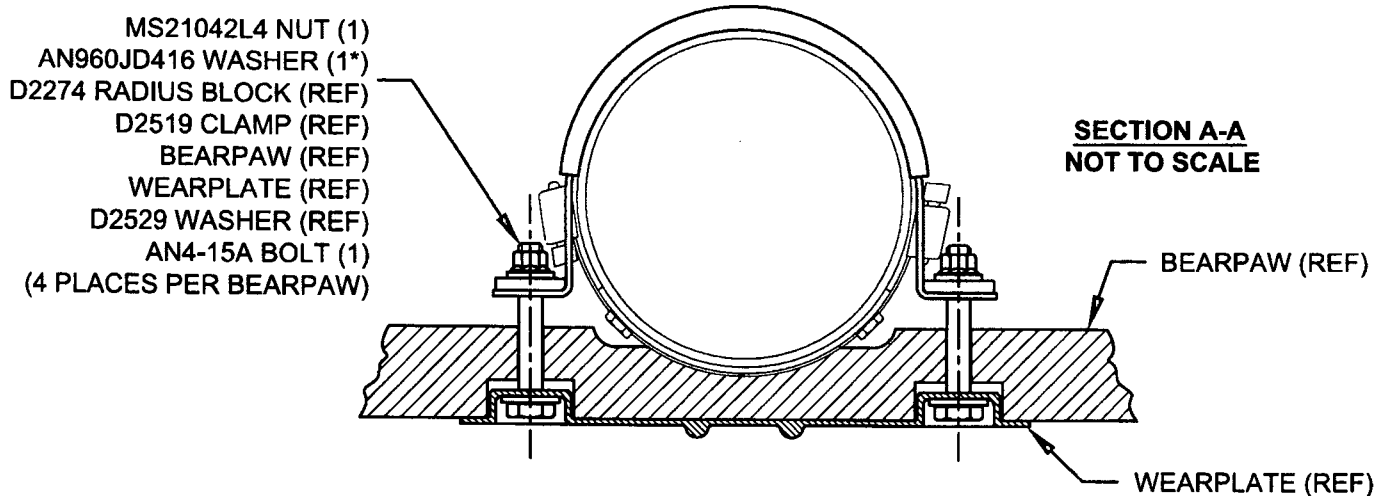
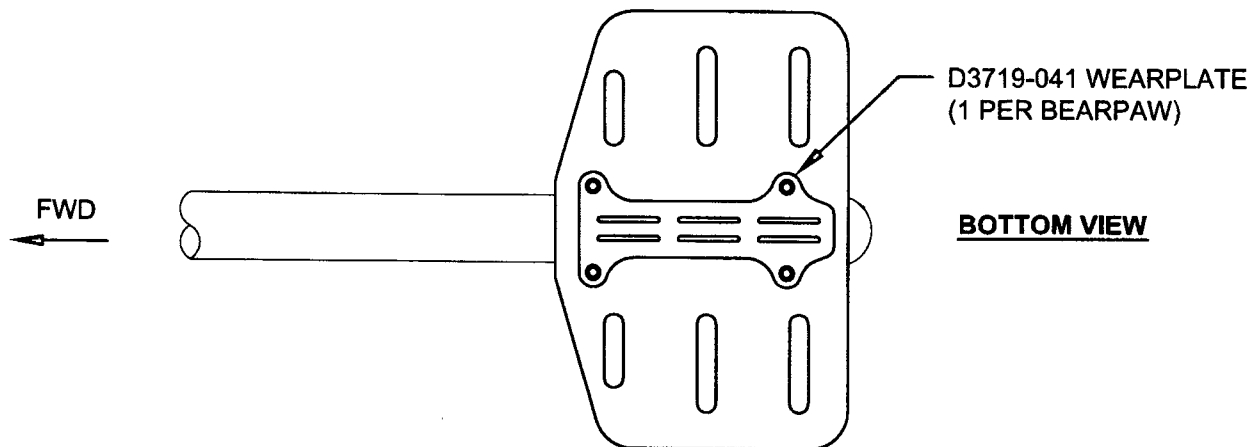
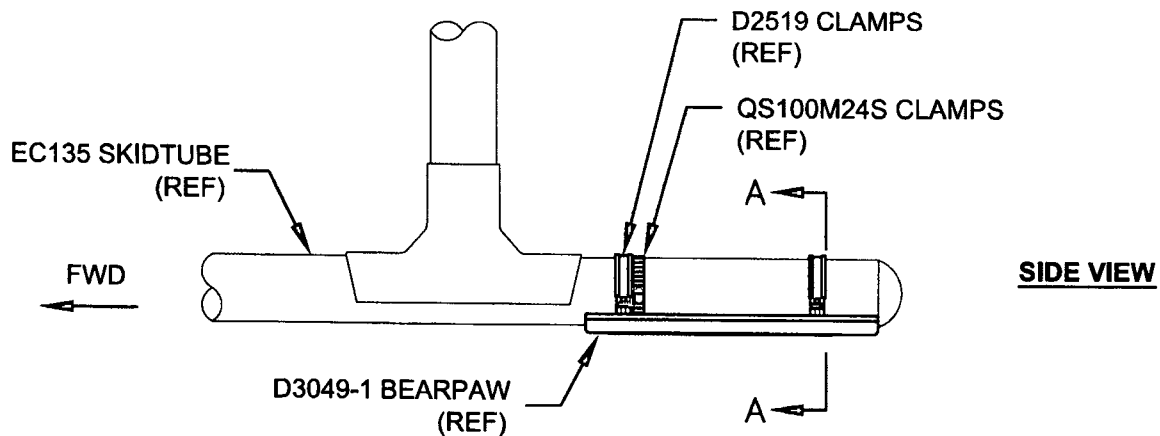
PARTS LIST

QTY	Part Number	Description
X	D135-692-041	Wearplate Kit
2	D3719-041	Wearplate
8	AN4-15A	Bolt
8	AN960JD416	Washer
8	MS21042L4	Nut (or MS21042-4)

SHOP COPY
RETURN TO
ENGINEERING
UNCONTROLLED COPY
SUBJECT TO AMENDMENT
WITHOUT NOTICE
WORK ORDER
NO. 1602-03
1602-03
1602-03

A	NEW ISSUE	CP	07.12.12
REV.	DESCRIPTION	BY	DATE
DESIGN	90	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
DRAWN	90		
CHECKED	10	DRAWING NO.	REV. A
MFG. APPR.	8	DSI 9400	SHEET 1 OF 2
APPROVED	10	TITLE	SCALE
DE APPR.	11	WEARPLATE KIT	NTS
DATE	07.12.12	COPYRIGHT © 2007 BY DART AEROSPACE LTD THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.	

FIGURE 1: D135-692-041 WEARPLATE KIT



* ADDITIONAL AN960JD416 WASHERS MAY BE INSTALLED UNDER THE NUTS TO ENSURE 1.5-4 THREADS IN SAFETY ON THE BOLTS. IT IS ALSO ACCEPTABLE TO REPLACE THE AN4-15A BOLTS WITH LONGER OR SHORTER AN4 BOLTS, IF REQUIRED.

DESIGN	90	DART AEROSPACE LTD	
DRAWN	90	HAWKESBURY, ONTARIO, CANADA	
CHECKED	1-0	DRAWING NO.	REV. A
MFG. APPR.	8	DSI 9400	SHEET 2 OF 2
APPROVED	1-0	TITLE	SCALE
DE APPR.	1-0	WEARPLATE KIT	NTS
DATE	07.12.12	COPYRIGHT © 2007 BY DART AEROSPACE LTD THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.	

4. WEIGHT AND BALANCE

Installation	Weight	LATERAL		LONGITUDINAL	
		Arm	Moment	Arm	Moment
D135-692-011 <i>Bearpaw Installation</i>	11.8 lb 5.36 kg	0.0 in 0.0 m	0.0 in-lb 0.0 m-kg	199.7 in 5.07 m	2356 in-lb 27.2 m-kg
D135-692-041 <i>Wearplate Kit</i>	2.24 lb 1.0 kg	0.0 in 0.0 m	0.0 in-lb 0.0 m-kg	199.7 in 5.07 m	447 in-lb 5.1 m-kg
D135-692-011 <i>Bearpaw Installation, Aft Location</i>	11.8 lb 5.36 kg	0.0 in 0.0 m	0.0 in-lb 0.0 m-kg	201 in 5.10 m	2372 in-lb 27.3 m-kg
D135-692-041 <i>Wearplate Kit, Aft Location</i>	2.24 lb 1.0 kg	0.0 in 0.0 m	0.0 in-lb 0.0 m-kg	201 in 5.10 m	450 in-lb 5.1 m-kg

5. PARTS LIST

Qty -011	Qty -041	Part Number	Description
X		D135-692-011	BEARPAW INSTALLATION
	X	D135-692-041	WEARPLATE KIT
4		D2182B060	RUBBER CUSHION
8		D2274	RADIUS BLOCK
2		D3049-1	BEARPAW
8		D2529	WASHER
4		D2519	CLAMP
	2	D3719-041	WEARPLATE
8	8	AN4-13A	BOLT
8	8	NAS1149D0463J	WASHERS
8	8	MS21042L4	NUT (OR MS21042-4)
4		QS100M24S	CLAMP